

# DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND RECORDING MEDIUM

Satoshi Itoi, et al.

20072

1/9

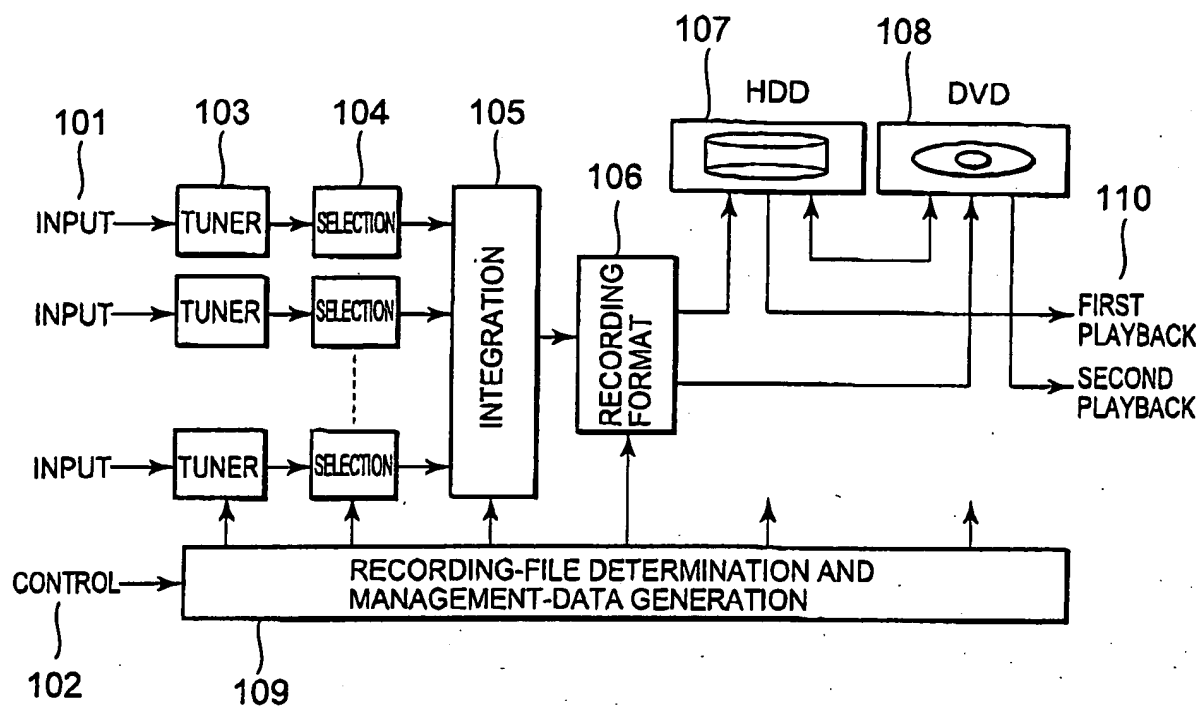


FIG. 1

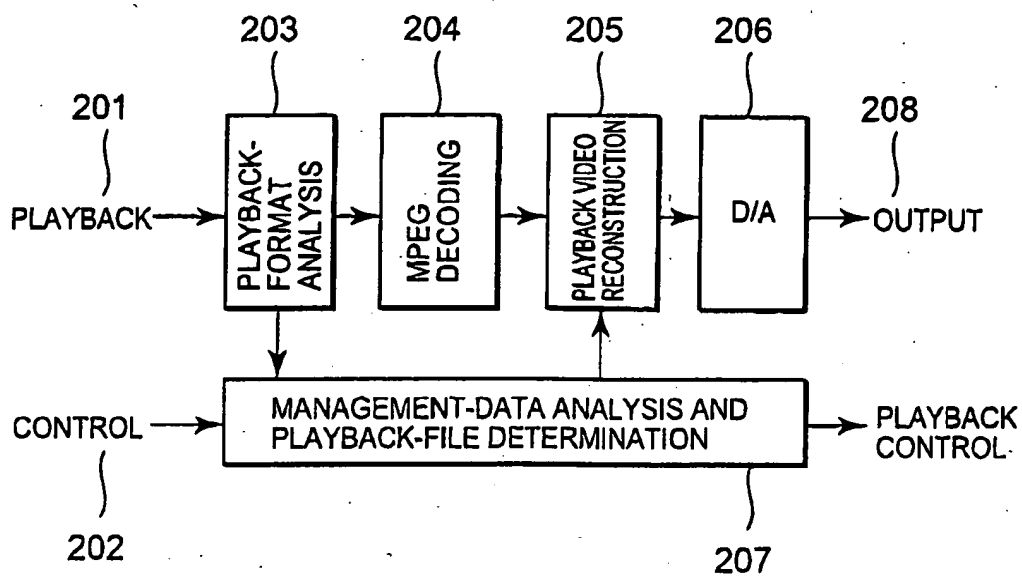


FIG. 2

DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND  
RECORDING MEDIUM

Satoshi Itoi, et al.

20072

2/9

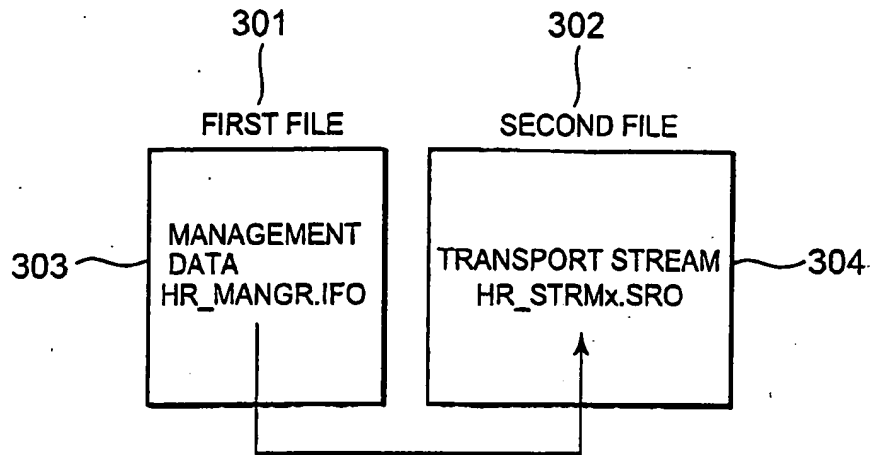


FIG. 3

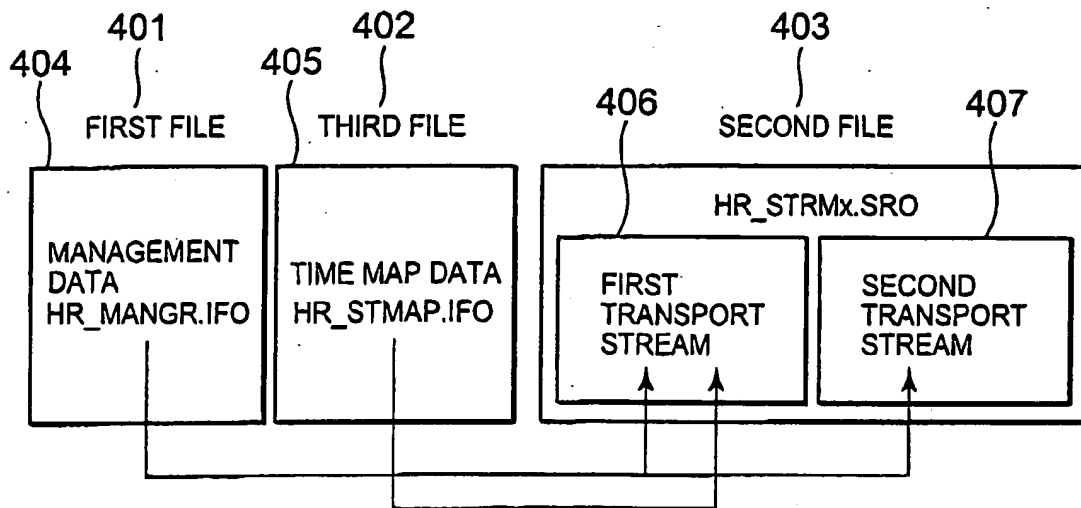


FIG. 4

DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND  
RECORDING MEDIUM

Satoshi Itoi, et al.

20072

3/9

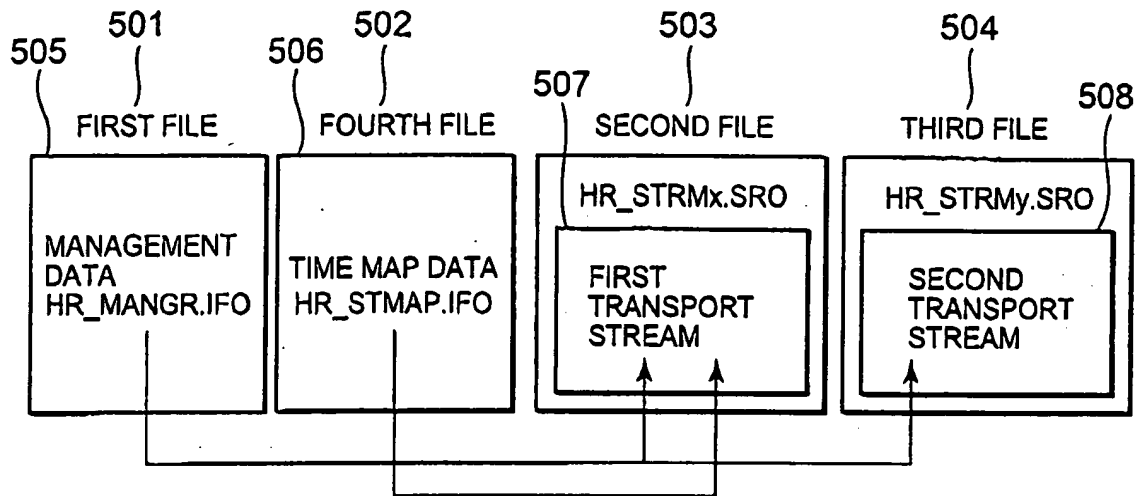


FIG. 5

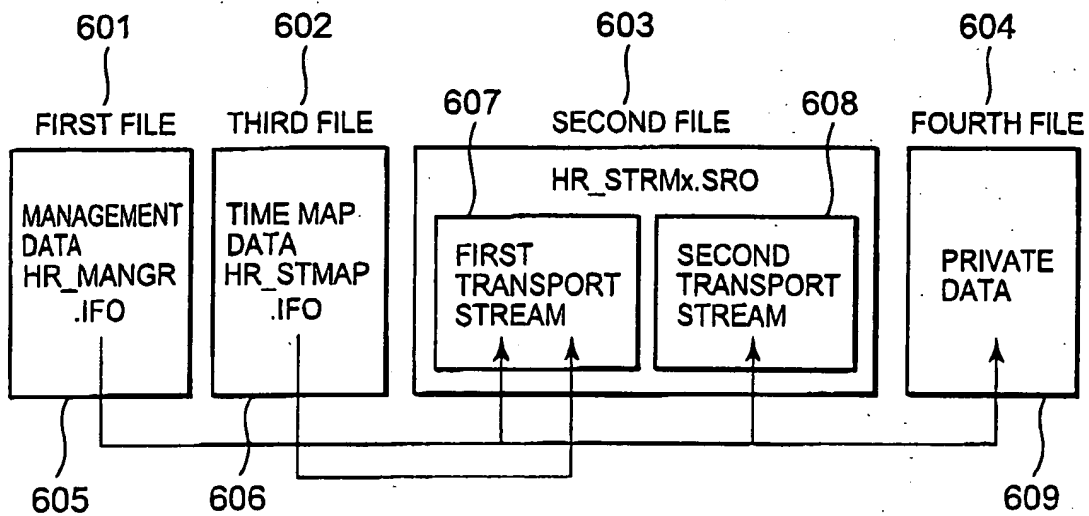


FIG. 6

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RECORDING MEDIUM

Satoshi Itoi, et al.

20072

4/9

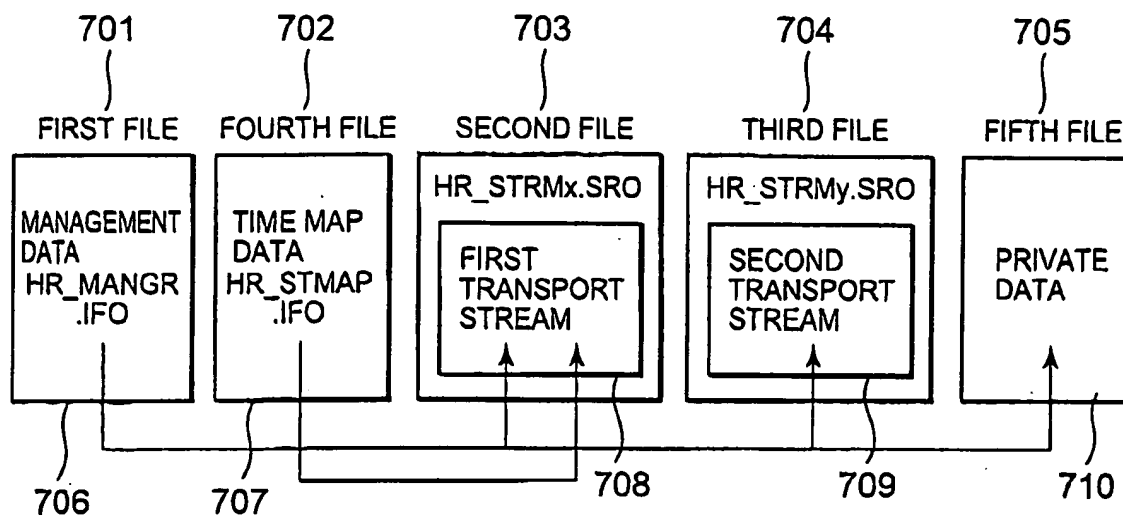


FIG. 7

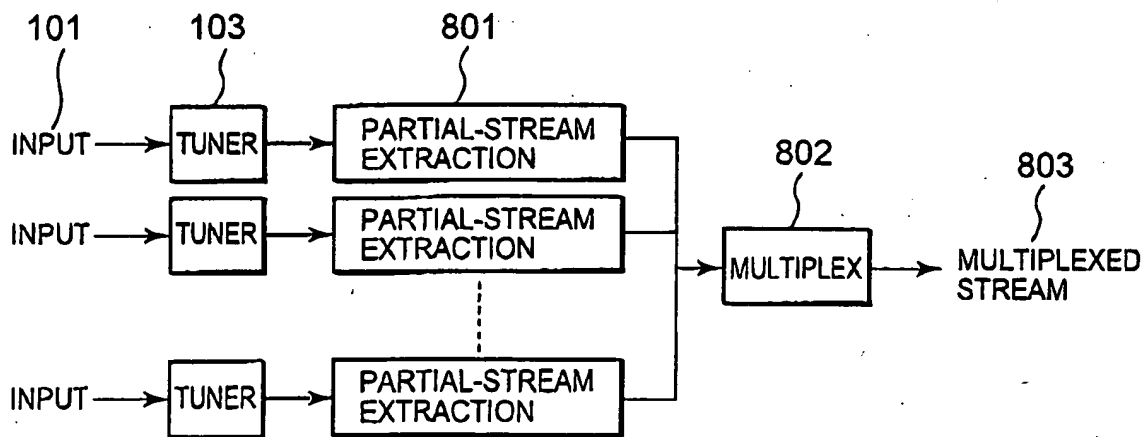


FIG. 8

DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND  
RECORDING MEDIUM

Satoshi Itoi, et al.

20072

5/9

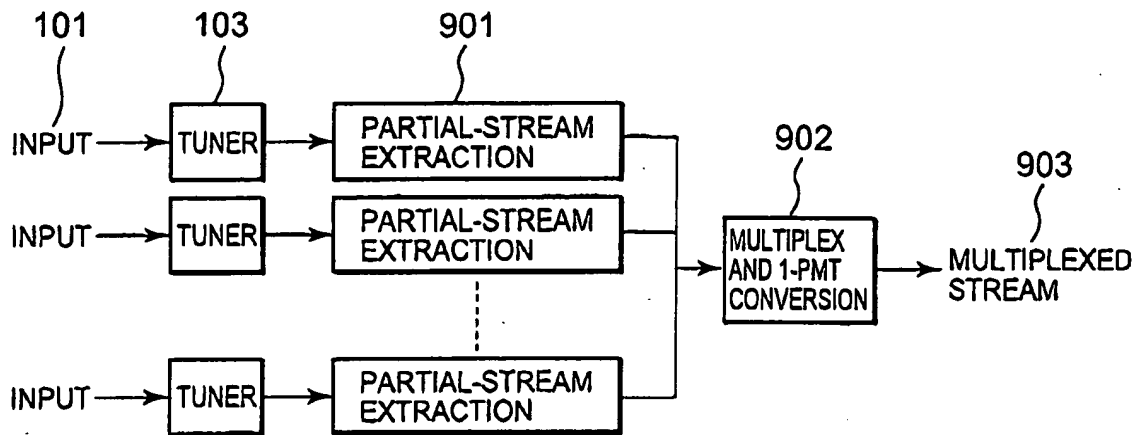


FIG. 9

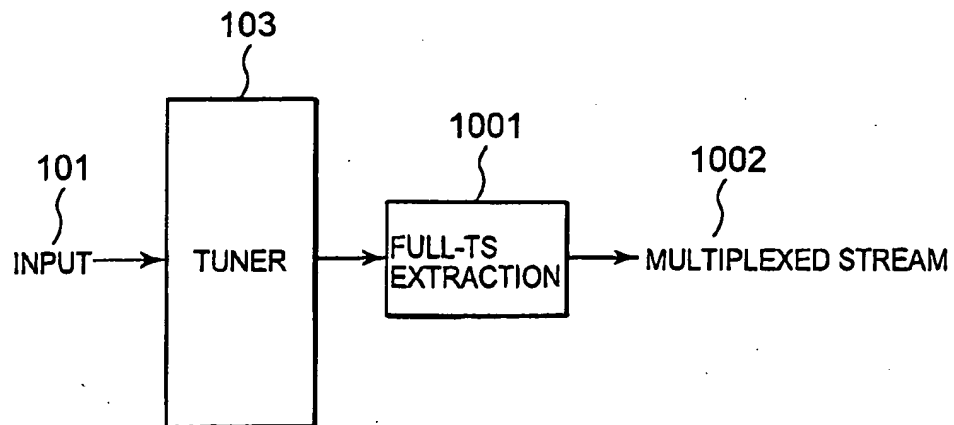


FIG. 10

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RECORDING MEDIUM

Satoshi Itoi, et al.

20072

6/9

DVD\_HDVR

HR\_MANGR.IFO

STREAM FILE INFORMATION TABLE (STM\_AVFIT)

SOB STREAM INFORMATION #1 ~ SOB STREAM INFORMATION #n

STM\_ATR

STREAM FORMAT

APPLICATION FORMAT

000 : JAPANESE DIGITAL BROADCAST (ARIB) FORMAT

001 : US ATSC FORMAT

010 : EUROPEAN DVB FORMAT

011~111 : RESERVED

COUNTRY CODE : CODE OF COUNTRY WHERE DATA HAS BEEN RECORDED

TS FLAG

00: 1-PMT PARTIAL TS

01: ANOTHER TS (MULTICHANNEL TS)

11: RESERVED

PMT NUMBER

THE NUMBER OF PMTS

CHANNEL NUMBER

THE NUMBER OF MULTIPLEXED CHANNELS IN THE OTHER TS (MULTICHANNEL TS)

TS FORMAT INFORMATION : TS-FORMAT CONFIGURATION INFORMATION

000 : 1-PMT 1-CHANNEL PARTIAL TS

001 : 1-PMT MULTICHANNEL PARTIAL TS

010 : MULTI-PMT MULTICHANNEL PARTIAL TS

011 : 1-PMT FULL TS

000 : MULTI-PMT FULL TS

101~111 : OTHERS

FOR (I=1; I<=CHANNEL NUMBER; I++) {

BROADCAST CHANNEL

000000: NHK GENERAL, 000001: NHK EDUCATIONAL, 000010: NIPPON TELEVISION

000100: FUJI TELEVISION, 000101: TELEVISION ASAHI, 000110: TELEVISION TOKYO

000111: MX TELEVISION, 001000: DIGICAS, 001001: BS COMMUNICATIONS

001010: MEDIA SERVE, 001011: BS NTV RADIO, 010000: PLAT-ONE

BROADCAST VIDEO MODE

000:MPEG-2, 001 : MPEG-1, 010:MPEG-4, 011 : H.264, 100 : WM9

101~111 : RESERVED

BROADCAST AUDIO MODE

000 : MPEG-2 AAC, 001 : Dolby AC-3, 010 : MPEG-1, 011 : MPEG-2 BC

10 : DTS1, 101 : LPCM, 110~111 : RESERVED

FIG. 11A

DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND  
RECORDING MEDIUM

Satoshi Itoi, et al.

20072

7/9

BROADCAST STILL-PICTURE MODE

000 : JPEG, 001 : PNG, 010~111 : RESERVED

BROADCAST ANIMATION MODE

000 : MNG, 001~111 : RESERVED

TIME MAP FLAG

00 : NOT CONTAINING TIME MAP

01 : CONTAINING TIME MAP

10~11 : RESERVED

PRESENTATION TIME STAMP (PTS) FLAG

00 : NOT CONTAINING PTS

01 : CONTAINING PTS

10~11 : RESERVED

STORAGE BROADCAST FLAG

00 : STANDARD BROADCAST STREAM

01 : STORAGE BROADCAST STREAM

10~11 : RESERVED

HR\_STMAP.IFO

TIME MAP TABLE FOR 1-PMT PARTIAL TS

1STREF\_SZ : SOBU FIRST REFERENCE PICTURE SIZE

DATABC\_PB\_TM : SOBU PLAYBACK DURATION (THE NUMBER OF VIDEO FIELDS)

DATABC\_SZ : SOBU SIZE (THE NUMBER OF SECTORS)

HR\_STRMx.SRO

1-PMT PARTIAL TS

TRANSPORT STREAM WHOSE DETAILS ON AT LEAST ONE OF STREAM, VIDEO, AUDIO,  
AND DATA FORMATS ARE RECORDED IN HR\_MANGR.IFO FILE AND WHOSE TIME  
MAP IS RECORDED IN HR\_STMAP.IFO OR HR\_STRMx.SRO FILE

ANOTHER TS (MULTICHANNEL TS)

TRANSPORT STREAM WHOSE DETAILS ON AT LEAST ONE OF STREAM, VIDEO, AUDIO,  
AND DATA FORMATS ARE RECORDED IN HR\_MANGR.IFO FILE AND  
WHOSE TIME MAP IS NOT RECORDED

HR\_EXTBC.DAT

PRIVATE TS WHOSE DETAILS ON VIDEO, AUDIO, OR DATA FORMAT ARE UNKNOWN,  
USER DATA, OR ANOTHER STREAM

FIG. 11B

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RECORDING MEDIUM

Satoshi Itoi, et al.

20072

8/9

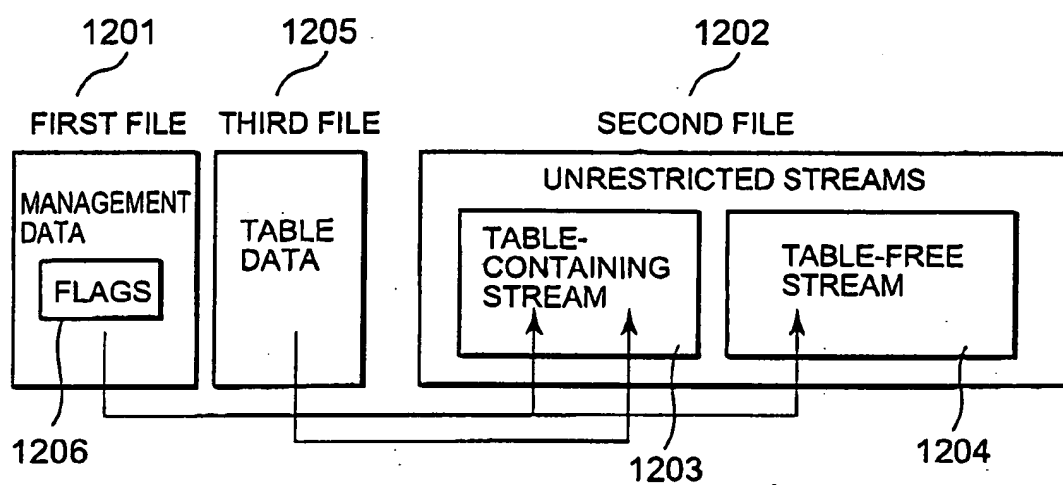


FIG. 12



DATA RECORDING METHOD, DATA PLAYBACK APPARATUS, AND  
RECORDING MEDIUM

Satoshi Itoi, et al.

20072

9/9

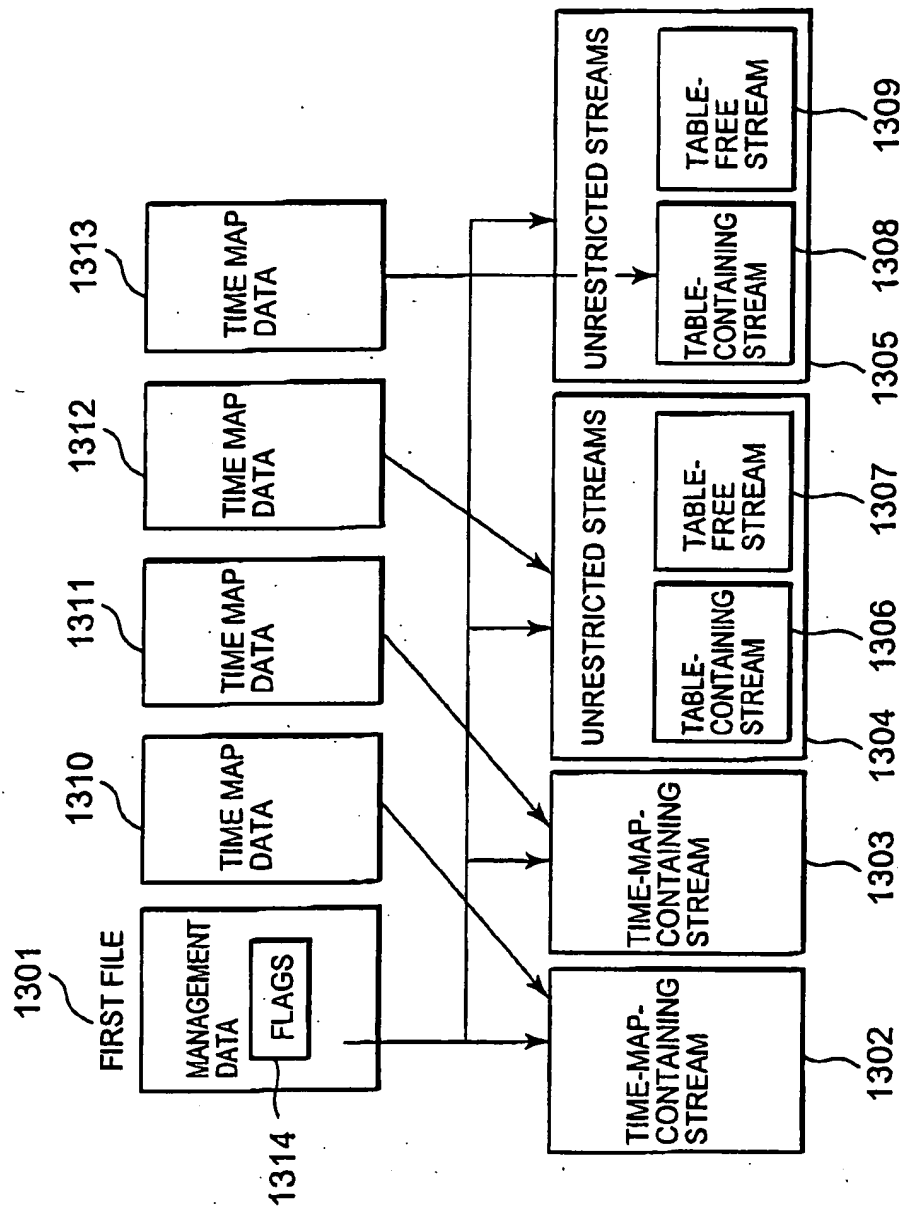


FIG. 13